



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,101	11/14/2005	Junichi Sato	107348-00465	4257

4372 7590 09/07/2006

ARENT FOX PLLC  
1050 CONNECTICUT AVENUE, N.W.  
SUITE 400  
WASHINGTON, DC 20036

EXAMINER

LAVILLA, MICHAEL E

ART UNIT PAPER NUMBER

1775

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/524,101

**Applicant(s)**

SATO, JUNICHI

**Examiner**

Michael La Villa

**Art Unit**

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>20050210</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 4 is objected to because of the following informalities: Applicant should use words to express the meaning of relational mathematical symbols in the claim. The claim is not an equation. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:
3. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Regarding Claims 1-3 and 5-7, it is unclear what is signified by the various parenthetical numbers. While these may be references to various layers described in the Specification, it is unclear whether they should be interpreted in a particular limiting manner, such as with respect to any characterizations in the Specification, or whether their presence is superfluous.
6. Regarding Claim 3, it is unclear what is meant by the phrase "enables the amount of Zn deposited on the surface of the Al-based structural member (1o) to be increased to give the base layer (2) comprising Zn having a required thickness." It is unclear what is the baseline against which the amount of deposited zinc "to be increased" is to be measured. Does the phrase "to be increased" mean "to thicken"? It is unclear what constitutes "required thickness."

It is unclear how this requirement is established. Should the word "having" be deleted? It is unclear what is meant by the phrase "enables the trivalent Cr-containing chromate coating for Zn to be reliably formed on the surface of the base layer (2) while ensuring the thickness of the base layer (2)." It is unclear what is required to recognize that the chromate coating is being "reliably formed." It is unclear what is required for "ensuring the thickness." What standards are being implicated? Does the presence of any chromate layer thickness achieve "ensuring the thickness"? An analogous rejection applies to Claim 7.

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:
8. The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
9. Claims 5-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In presenting new Claims 5-7, applicant has eliminated the requirement that the Cr-containing chromate coating be for zinc. It is unclear how the originally filed application textually supports eliminating this requirement, and it is unclear how applicant justifies, by textual support or otherwise by recognition of one of ordinary skill in the art, that these claims possess antecedent support.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

11. A person shall be entitled to a patent unless –
12. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
  - (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
13. (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
14. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 102(a or e) as being anticipated by Oshima et al. USPA 2003/0148122. Oshima et al. teaches that a zincated aluminum article may be further coated with a trivalent chromium containing chromate coating. See Oshima et al. (paragraphs 20-42).
15. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by USUI USPA 2002/0090528. USUI teaches coating an aluminum tube with zinc and then with trivalent chromium containing chromate. See USUI (paragraphs 21-25 and 30-34; and Claim 9).

***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be

patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

18. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Oshima et al. USPA 2003/0148122. Oshima et al. teaches that a zincated aluminum article may be further coated with a trivalent chromium containing chromate coating. See Oshima et al. (paragraphs 20-42). Oshima et al. may not exemplify coating a zincated aluminum article, but teaches that such articles are effective substrates for the chromate coating of Oshima et al. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the chromate coating of Oshima et al. on the zincated aluminum substrate as Oshima et al. teaches that such substrates are effectively protected by the chromate coating of Oshima et al. Regarding Claim 4, Oshima et al. suggests that processing times may be as short as five seconds for the chromate treatment. It would have been obvious to one of ordinary skill in the art at the time of the invention to expose the zincated aluminum to the chromate treatment for as short as five seconds as Oshima et al. suggests that effective coatings

may form in this time period. The zinc layers are taught to be eight microns. It would be expected that formation of zinc layers of this thickness by zincate treatment would require at least 30 seconds. Moreover, the zinc layer thickness is taught as being effective when of arbitrary thickness. See Oshima et al. (paragraph 22). It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a zinc layer of arbitrary thickness, including those that are so large that treatment times would necessarily exceed thirty seconds, since Oshima et al. teaches that articles formed of these layers are effectively protected by the chromate treatment of Oshima et al.


### ***Conclusion***

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.
20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1775

21. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael La Villa  
2 September 2006

  
MICHAEL E. LAVILLA PH.D.  
PRIMARY EXAMINER